Amendments to the Claims

Please amend Claims 1, 25, 27 and 29 as follows. Please delete claim 28 without prejudice.

The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1.   (Currently amended) A method for supporting wireless communications, the method comprising the steps of:

allocating a first channel to support message transmissions from a base station to multiple field units;

allocating a second channel to support message transmissions from the field units to the base station;

assigning time slots in the first and second channel for message transmissions between the base station and field units; and

maintaining synchronization between ~~a field unit~~ a selected one of the field units and the base station by analyzing a message received in a time slot and adjusting timing of [[a]] the selected one field unit by transmitting a feedback message to ~~a corresponding~~ the selected field unit.

2.   (Original) A method as in claim 1 further comprising the step of:

partitioning the first channel into active and standby time slots, wherein active time slots correspond with field units transmitting a data payload on a reverse link traffic channel.

3.   (Original) A method as in claim 2 further comprising the steps of:

detecting a request by a field unit to transmit a data payload from the field unit to the base station;

assigning the requesting field unit an active slot in the first channel; and

allocating traffic channels to support a data transfer between the requesting field unit and the base station.

4.   (Original) A method as in claim 3 further comprising the step of:

reassigning a field unit a standby time slot in the first channel after completion of the data transfer.

5.   (Original) A method as in claim 3 further comprising the step of:

maintaining synchronization between a field unit and the base station by analyzing at least one message received on a traffic channel and adjusting timing of the field unit based upon a feedback message to the field unit to advance or retard timing.

6.   (Original) A method as in claim 5 wherein the base station analyzes timing of a marker in the traffic channel to maintain synchronization.

7.   (Original) A method as in claim 6 wherein the marker in a traffic channel is a string of pilot symbols.

8.   (Original) A method as in claim 1 further comprising the step of:

dividing the first and second channels into a predetermined number of time slots to support periodic communications between the base station and each of multiple field units.

9.   (Original) A method as in claim 1 further comprising the steps of:

detecting a request by a field unit to establish a link with the base station;

analyzing the request to determine an initial timing adjustment to be made at the field unit for synchronization; and

transmitting timing adjustment information to the field unit for synchronizing the field unit with the base station.

10.   (Original) A method as in claim 9, wherein the timing adjustment information is transmitted to a field unit over a paging channel.

11.   (Original) A method as in claim 9, wherein the timing adjustment information is a multi-bit value transmitted to a field unit notifying the requesting field unit of an amount to advance or retard timing.

12.   (Original) A method as in claim 1, wherein field units are notified of time slot assignments based upon messages over a forward link paging channel.

13.   (Original) A method as in claim 1, wherein the base station analyzes a field unit message and determines whether to advance or retard timing of the field unit.

14.   (Original) A method as in claim 1, wherein time slots are assigned in the first and second channel based on a predetermined offset.

15.   (Original) A method as in claim 1, wherein a single bit in a time slot indicates whether a corresponding field unit should advance or retard timing.

16.   (Original) A method as in claim 1, wherein message transmissions on the first channel are encoded using BCH.

17.   (Original) A method as in claim 1 further comprising the step of:

        assigning short PN codes for use by a field unit, a short PN code being transmitted by the field unit in an assigned time slot to provide an indication to the base station.

18.   (Original) A method as in claim 17, wherein an assigned short PN code indicates a request by the field unit to transmit a data payload to the base station.

19. (Original) A method as in claim 17, wherein an assigned short PN code indicates a request by the field unit to remain in a standby mode.

20. (Original) A method for synchronizing wireless communications between a base station and a field unit, the method comprising the steps of:

assigning time slots of a forward link channel to each of a plurality of field units in which a base station transmits messages, each field unit determining messages directed to the field unit based upon receipt of a message in a particular time slot;

assigning time slots in a reverse link channel in which the field units transmit messages to the base station, the base station identifying from which field unit transmitted a message based upon reception in a particular time slot;

adjusting message transmissions from each field unit such that messages transmitted from the plurality of field units arrive at the base station in a corresponding time slot of the reverse link channel.

21. (Original) A method as in claim 20 further comprising the step of:

analyzing messages received by field units and transmitting a message on the forward link to a corresponding field unit to adjust timing on the reverse link channel.

22. (Original) A method as in claim 21, wherein the message to adjust timing in the reverse link channel for a particular field unit includes an indication whether to advance or retard timing.

23. (Original) A method as in claim 22, wherein the indication of whether to advance or retard timing is based on a single bit from the base station indicating to advance or retard timing a first predefined amount.

24. (Original) A method as in claim 23, wherein timing is advanced or retarded based on a second predefined time if the single bit is a same state for a specified number of time periods in a row, the second predefined time greater than the first predefined time.

25.   (Currently amended) A method for supporting wireless communications between a base station and a plurality of field units, the method comprising the steps of:

allocating a first channel to support message transmissions from the base station to the field units;

allocating a second channel to support message transmissions from the field units to the base station;

assigning time slots in the first and second channel for message transmissions between the base station and each field unit; and

assigning a set of codes for use by a field unit, each code corresponding to a predefined function or request message that is transmitted in a time slot on the second channel, a code being transmitted by the field unit on the second channel to provide an indication to the base station.

26.   (Original) A method as in claim 25, wherein the set of codes is unique to each field unit.

27.   (Currently amended) A method as in claim [[26]] 25, wherein the set of codes is a set of short PN codes.

28.   (Cancelled).

29.   (Currently amended) A method as in claim [[28]] 25, wherein a code of the set of codes indicates a request by the field unit to be allocated reverse traffic channels for transmitting a data payload to the base station.